
Providing Quality Wildlife-Dependent Recreation
for Visitors to the National Wildlife Refuge System

U.S. Fish & Wildlife Service White Paper
for the
Conservation in Action Summit



Conservation in Action Summit

A new century of conservation challenges

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Executive Summary

The authors of the National Wildlife Refuge System Improvement Act of 1997 understood that the support of people is necessary to conserve wildlife. Congress, in its findings, agreed that the National Wildlife Refuge System “was created to conserve fish, wildlife, and plants and their habitats and that this conservation mission has been facilitated by providing Americans opportunities to participate in compatible wildlife dependent recreation, including fishing and hunting, on System lands and to better appreciate the value of and need for fish and wildlife conservation.”

Further, Congress realized the Refuge System serves a “pivotal role” in the conservation of wildlife and its habitat. While it may not be the total answer to wildlife conservation, the Refuge System is critical. If the Refuge System could build a constituency that cares about wildlife, connects with national conservation organizations, and engages all partners who could contribute to wildlife conservation, the impact would reverberate for generations. The collaborative efforts with states, national partners, Friends organizations, and community partners would be the cornerstone. The Act’s authors may well have envisioned just such a role for the Refuge System.

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If managed in accordance with the principles of sound fish and wildlife management and administration, the Refuge System, in the eyes of the Act’s authors, should offer opportunities for fishing, hunting, wildlife observation and wildlife photography, and environmental education and interpretation as generally compatible uses. The authors knew that the citizenry determines the ultimate importance of wildlife conservation. Perhaps that is why they stated, “wildlife dependent recreation ...is directly related to the mission of the National Wildlife Refuge System.” They must have realized that, no matter how hard a group of outstanding individuals toils on the remnants of once majestic habitats, they can not save America’s wildlife unless the public is involved. Recreation is a way to introduce the public to the value of wildlife and the beauty of its habitat. Because the Refuge System views itself as putting “wildlife first,” recreational opportunities on refuges naturally are wildlife dependent.

The team grappled with how to deliver meaningful, enjoyable wildlife dependent recreation to people that will induce them to support conservation of America’s wildlife. The team also struggled with a series of operational questions. How do we identify audiences for wildlife dependent recreation and explain the importance of the Refuge System? What should be the threshold for various recreation activities? Who should bear the costs for the recreational opportunities afforded refuge visitors? The questions are so staggering that the temptation may be to retreat, lock the gate, and go back to the work we do so well – land management. The summit offers an opportunity to consider how quality wildlife dependent recreation fulfills the Refuge System’s mission and how the Refuge System can deliver recreation in ways and at levels that will boost wildlife conservation.

The Refuge System needs the involvement of people. Each of the 544 national wildlife refuges is a neighbor in a local community and within the community of national conservation organizations. By providing quality wildlife dependent recreation – the

priority uses of hunting, fishing, wildlife observation and wildlife photography, environmental education and interpretation — to citizens in local communities and to travelers, the Refuge System will perpetuate and enhance Americans’ interest in and understanding of wildlife conservation. By sharing refuges’ natural treasures with the Americans who own them, the Refuge System will cultivate a cadre of supporters who will nurture what they experienced. Without caring neighbors, refuges will remain removed from mainstream America and could be lost.

Hunters and bird enthusiasts were among the first to take a public stand for habitat conservation because habitat was essential to their recreation. Even today, hunters, anglers, birders, and photography enthusiasts are a core constituency in the wildlife conservation community. Wildlife refuges will survive only if they continue to be relevant to people; quality wildlife dependent recreation helps keep them relevant. Nearly 90 percent of Americans believes outdoor recreation benefits the environment because it gives people a good reason to care about natural resources, according to *Sportfishing in America*, 2001.

Compatible quality wildlife dependent recreation gives refuge visitors wonderful opportunities to discover, learn about, and experience wildlife and wildlife habitat. With 544 wildlife refuges spread across 50 states and one within an hour’s drive of every major U.S. city, there are a multitude of opportunities to reach children, adults, and families about the benefit of wildlife conservation.

Purpose and Need

Quality wildlife dependent recreational opportunities further the mission of the Refuge System in many ways:

- Engages the public in, and increases community support for, the conservation mission of the system;
- Makes fish, wildlife and wildlife habitat relevant, meaningful, and accessible to the American public;
- Instills a sense of ownership, understanding, and appreciation for fish, wildlife, and habitat; and
- Elevates a suite of priority of wildlife-dependent uses that focus on the visitor’s relationship with wildlife.

Refuge System Improvement Act

The National Wildlife Refuge System Improvement Act of 1997 clearly enunciates the mission of the Refuge System: “The mission of the System is to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans.” Specifically, the Act mandates:

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- Compatible wildlife-dependent recreation is a legitimate and appropriate general public use of the System, directly related to the mission of the System and the purposes of many refuges, and which generally fosters refuge management and through which the American public can develop and appreciation for fish and wildlife.
 - When the Secretary determines that a proposed wildlife-dependent recreational use is a compatible use within a refuge, that activity should be facilitated, subject to such restrictions or regulations as may be necessary, reasonable, and appropriate.
 - Increased opportunities for families to experience compatible wildlife-dependent recreation, particularly opportunities for parents and their children to safely engage in traditional outdoors activities such as hunting and fishing.

Fulfilling the Promise Vision

Fulfilling the Promise gives the historic context for Refuge System management and provides a vision for the future. It also gives prominent attention to providing quality wildlife dependent recreation in the “People” section, “Sharing a Passion for Wildlife,” goals P1- P10.

The *Fulfilling the Promise* vision statements most integral to this team are:

- The National Wildlife Refuge System of the next century will provide the American people a *Legacy of Wildlife*, a *Place Where Visitors are Welcome*, *Opportunities for Stewardship*, and a *System to Appreciate*.
- “Opportunities to witness some of the world’s most amazing wildlife spectacles amidst breathtaking scenery.”
- “Protecting refuge resources and the safety of visitor are the most fundamental responsibilities of refuge managers. Refuge law enforcement is a dangerous job.”
- Core competencies defined and gaps identified, then fulfilled for staff meeting with the public. “Sufficiently skilled and experienced staffs must be in place to fulfill the System’s mission and protect its resources.”
- Meeting the Minimum Standards -- the 10 public use standards. Current standards: Develop Visitor Services Plan, Welcome and Orient Visitors, Provide Quality Hunting, Provide Quality Fishing, Provide Quality Wildlife Observation and Photography, Provide Quality Environmental Education, Identify Key Resource Issues, Manage for Appropriate and Compatible Recreation Activities, Communicate with Off-Site Audiences, Develop Volunteer and Partnership Programs.
- Develop clear guidance for determining appropriate and compatible public uses. (A process for determining compatibility for recreation activities and other activities is in place; the appropriate uses policy is the issue.)

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- Develop a Visitor Improvement Priority System to rank operational, maintenance, and construction projects for public recreational use programs and facilities.
 - Work for clearer authorities regarding fees and concession management in order to increase funding returned to the collecting refuge.
 - Forge new and nontraditional alliances to broaden support for the System by establishing citizen and community partnerships on all staffed refuges. Strengthen partnerships with states, Tribes, nonprofit organizations, and academia.
 - Develop new policies and authorities for establishing formal relationships with the business community.
 - Update the outreach campaign. Build a broader base of public support for wildlife conservation by reaching out and involving a larger cross section of the American public in our public use program and community partnerships efforts.

A Sidebar The U.S. Centers for Disease, Control and Prevention report that poor diet and physical inactivity are quickly overtaking tobacco as the nation’s number one health issue, with 65 percent of adults in America either overweight or obese.

While the Department of the Interior does not make health recommendations, it is well known that recreational activity, like walking and hunting or fishing, are ways to lose pounds, improve cardiovascular health, lower cholesterol levels, decrease blood pressure and relieve stress.

The Department manages one in every five acres in this country, including about 100 million acres in 544 national wildlife refuges. “Public lands are not just grizzlies and geysers,” explained Secretary Norton. There is a wildlife refuge within an hour’s drive of every major city in the US.

The Department’s “Take Pride in America” campaign encourages volunteers across the country to help repair and restore facilities and lands. These activities also contribute to healthier lifestyles with activities such as restoring trails and clearing paths.

Compatible wildlife dependent recreation offers Americans a chance to get into the outdoors and have a healthy experience and enjoy wildlife at the same time. As Secretary Norton has said, “It’s not just about caring for the public lands; it’s about caring for the people who use them.”

**Essential Elements
of Quality
Wildlife-Dependent
Recreation**

The team was instructed to explore how the Refuge System can further its role in America’s wildlife conservation efforts by providing Americans with quality wildlife-dependent recreation experiences that enhance their interest in wildlife conservation.

The team realized that if more Americans could experience a national wildlife refuge, more people would know the “best kept secret” and join in wildlife conservation. Questions about demographics, recreation trends, social science studies, and wildlife populations came into play. The team agreed that knowing such information would be useful in building the best wildlife dependant recreation programs across the Refuge System. Sporadic spurts of refuge activity in developing consistent communication tools, facilities, staff, volunteer forces, wildlife dependant recreational activities, community engagement, Friends organizations, national partnerships, etc. are helpful, but not efficient. Knowing how to reach Americans with a great message is hard work. As one refuge manager stated, “Being the ‘best kept secret’ is no badge of honor.”

Team ground rules relevant to quality wildlife dependent recreation:

“Being the ‘Best Kept Secret’ is no badge of honor.”

- Wildlife conservation and wildlife dependent recreation work hand-in-hand. Most participants in refuge recreation come from the local communities. There is a direct correlation between better wildlife conservation on a refuge and happy neighbors.
- Refuges need to get people onto the land, near the wildlife, and out of visitor centers; improve the appearance and recognition of refuges as members of a system; welcome visitors with information and an orientation; and, increase the relevancy of the refuge to the local community and to national partnerships.
- Protection of visitors and natural resources must be provided. Law enforcement is an essential element in the Refuge System’s mission to conserve wildlife.
- A national communications strategy that delivers core and consistent wildlife conservation messages is critical. Otherwise, important opportunities are lost to help citizens develop personal values that engender support for wildlife conservation and solidify the position of the Refuge System as an integral neighbor.
- New and ongoing wildlife dependant recreational uses should help visitors focus on wildlife and other natural resources. Activities should make visitors aware of the most important resource issues at the refuge, support management plans that address those issues, and show how the refuge contributes to the Refuge System mission.
- Wildlife dependent recreation activities should always consider participant’s needs. Supporting quality recreation implies a shared understanding of what that means to employees and visitors. For example, if the wildlife is active at dawn, but the refuge gate does not open until 10 a.m., the thrill of the hunt and the quality of the experience is greatly diminished. Listening to others is important in all endeavors. Once the refuge recreation goals are defined, the Refuge System must dedicate efforts to these goals.

The Wildlife-Dependent Recreation Summit Team identified six essential elements:

- 1) Involve Communities and National Partners
- 2) Welcome and Orient Visitors
- 3) Provide Hunting and Fishing Opportunities
- 4) Provide Wildlife Observation and Wildlife Photography Opportunities
- 5) Provide Environmental Education and Interpretation Opportunities
- 6) Protect Visitors, Natural and Cultural Resources

**Key Outcomes of
Providing Quality
Wildlife Dependent
Recreation**

The following outcomes corresponds to the six essential elements listed in the preceding section:

1. Refuges Will Become Relevant to Citizens when Communities and National Partners Are Involved

By knitting together the differing interests of people across the wildlife spectrum, the Refuge System will establish constituent coalitions that promote wildlife conservation in America. Specifically, by offering quality priority wildlife dependent recreation activities, the Refuge System can engage communities, citizens and national partners in broad efforts to conserve habitat.

When visitors report a high level of satisfaction from their quality wildlife dependent recreation on refuges, communities gain a sense of pride in their nearby refuges. Communities, citizens, and refuges can work together to plan for and deliver quality “Big Six” opportunities. The Comprehensive Conservation Plan process is an excellent example of how citizen, community, and refuge staff participation encourages good neighbor partnership. Volunteer participation in planning will foster personal investment into the process and help make refuges relevant to citizens and their communities. Friends organizations are proud community partners with whom 250 national wildlife refuges plan for the future.

Refuge staff will actively seek out the community and become involved in community planning - as a community member. By involving the local community and being involved in the local community, refuges provide the opportunity for the Refuge System mission to be embraced and conservation to flourish. Beyond community relations, participation in quality wildlife dependent recreation can engender a conservation ethic and appreciation and support for the Refuge System’s mission.

The closest citizen partner organization to any refuge is its Friends organization. These 250 nonprofit organizations are the fundamental electrical current into the community from the refuge. By developing close community relationships over the next 15 years,

a vibrant Friends organization will exist for every refuge. To their communities and to Congress, Friends organizations will represent a tapestry of refuge treasures and tribulations. These organizations' members often form the foundation of a refuge's volunteer program as well. Strong Friends organizations will create a huge pool of knowledgeable and talented adjunct workers.

By seeking strong partners anchored in the community, a refuge can provide quality visitor services without hiring additional staff. A concessionaire who knows the local wildlife, has an educated and trained staff, and knows how to run a financially sound business is a great asset to a refuge delivering wildlife dependent recreation. A concessionaire is often the frontline for visitors on the refuge and projects a high profile on a refuge. A concessionaire and refuge manager working hand-in-hand can ensure that the Refuge System's and the refuge's core messages are correct and delivered in the best way. Obviously, the concessionaire must be a financial partner, a recreation partner and a vital communications partner.

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Over the next 15 years, the Refuge System will engage in many kinds of commercial uses. One outcome will be development of system-wide management guidelines and regulations. Currently, there is disorganization in the management of commercial enterprises on refuges. The Concessions Account in the Fish and Wildlife Service budget is not managed uniformly across the Refuge System. No concessions legislation exists. An outcome of learning how to conduct better commercial activities to facilitate compatible wildlife dependent recreation will be new legislation, regulations, and policies to help refuge managers.

The Refuge System will have its profile elevated through national partnerships dedicated to wildlife dependent recreation. National partners such as the American Sportfishing Association, the American Zoological Association and the National Wild Turkey Federation can weave local issues into national platforms and, at the same time, weave these national platforms into their communications with local chapters or business partners. This network can support wildlife dependent recreation on local refuges. Consistent, repetitive communications will engender broader support for individual refuges and the Refuge System. By developing a roster of national partners who share recreation interests, an outcome will be the development of goals that meet the mission of members.

Successful community relations and national partnerships will help develop sophisticated communications. Localized communications will provide access to hundreds of small markets as well as core community outlets such as schools and community centers. Designing a communications strategy for local implementation requires significant, unifying creative efforts and a philosophic shift within the Refuge System to include people in the conservation equation.

Refuge stories can reach thousands of members of partner organizations through their media. A well-written article lets a reader experience a quality hunt or birding event, even if an individual does not visit a refuge, thus spreading the wildlife

conservation message. Strategically placed information about the Refuge System, descriptions of Big 6 opportunities and the overall value to specific audiences can enhance a visitor's experience and benefit the Refuge System.

2. An Identity Will Be Branded when Visitors Are Welcome and Oriented

A warm welcome and an orientation to the refuge will create a satisfied visitor who enjoys the refuge, wants to come back, and supports the work of the refuge. A plethora of satisfied visitors creates a constituency that votes to support the National Wildlife Refuge System so it can conserve wildlife for the benefit of future generations. That warm welcome and orientation begins before the visitor ever reaches the refuge gate.

Refuge staffs have taken preliminary steps by putting out clear directional signage from main thoroughfares to the refuge. They have ensured the availability of up-to-date and standardized brochures, Web sites, maps, and orientation kiosks that describe the recreational activities. Consistent and appropriately placed boundary signs, orientation and directional signage, and informational/interpretive displays add to a visitor's experience.

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Because signs are the first introduction to a refuge, the Refuge System has begun to develop a manual of sign standards for all refuges. The manual will provide consistent and effective guidance and set a standard for signs throughout the Refuge System. The manual will be a major step toward developing a consistent brand and image for the Refuge System.

Providing clean and appropriately constructed basic visitor facilities – such as restrooms, parking areas, information kiosks, blinds, docks, launches, trails, boardwalks, observation towers, and contact stations – welcome visitors and provide orientation for an enjoyable outdoor experience. By providing these small facilities, the Refuge system will engender public support for refuges.

Finally, having a professional and courteous cadre of staff, volunteers, and partners to answer questions and assist the public is optimal.

Each element, from kiosks to entry signs, contributes to the development of a Refuge System brand. The brand may be characterized by pristine scenery or wildlife spectacles but should always include knowledgeable, friendly contacts and facilities conducive to meeting visitors' expectations. Once people grow assured that they will find appealing elements within the Refuge System, they will speak about the value and benefits of the Refuge System. By deliberately creating an image and appropriate programs that meet visitor expectations, the Refuge System will shape its image so visitor expectations evolve in a manner consistent with the conservation mission. Developing a brand requires reinforcement of this personal appeal and solidifies the importance of the refuge among potential supporters. Furthermore, a brand gains strength over time, and the impact grows exponentially.

Providing high-quality hunting and fishing opportunities is an excellent means to build relevancy and involvement of the local community.

Consider Nike, which built its brand on the philosophy that consumers buy the products used by a small percentage of premier athletes in certain sports categories. Based on analyses of the shoe market and the preferences of potential buyers, Nike designed the now widely recognized “swoosh,” complementing the symbol with the company name. Nike placed the “swoosh” on all of its products and in all of its advertising. Endorsements by top athletes strengthened Nike’s superior performance image. Furthermore, Nike’s prime placement of products and advertisements in storefronts completed the process of placing Nike at every step in the purchasing process. All of this built a memorable brand, along with the superior performance of the product, which was modified to serve individual sports categories and whose innovations were protected through patents. After more than 10 years, Nike’s dedication to building its brand put it at the top of the athletic apparel market. Adapting this approach, the Refuge System must relate refuges to visitors in positive ways through quality experiences so they support the product – wildlife conservation.

3. A Citizen Constituency Is Built through Quality Hunting and Fishing, Wildlife Observation and Wildlife Photography, and Environmental Education and Interpretation Opportunities

With more invitations to participate in quality wildlife dependent recreation, the local community’s link to local wildlife conservation will strengthen, making the refuge relevant to citizens. On an individual level, a family’s fun, safe outdoors experiences will sow small seeds for a larger conservation ethic and appreciation for the work of the Refuge System and its partners. Satisfied Big 6 participants are likely to become involved in wildlife conservation and promote an appreciation of natural and cultural resources.

As a partner of the refuge, the community benefits financially. Visitors who make the refuge a destination for outstanding opportunities to hunt, fish, and observe or photograph wildlife observation will stay in local hotels, eat in local restaurants, and patronize local stores. Birding is one of America’s fastest growing outdoors activities, bringing millions of dollars into the economy. With work, refuges help communities and communities help refuges as they share mutual benefits.

Another outcome of fostering compatible wildlife dependent recreation is a strong collaborative partnership with states. Fees paid for licenses to hunt and fish on refuges benefit the state programs that support wildlife conservation. States and the NWRs hold habitat that is critical to the future of the nation’s wildlife. Together, states and refuges should be able to provide better hunting and fishing quality experiences for visitors.

Good planning for quality wildlife dependent recreation over the next 15 years is an expected outcome. Planning requires the collection of baseline data on refuge biological resources, visitors, recreation successes and deficiencies, American demographics and social science information, educational resources and practices, marketing strategies and recreation trends. One research tool to learn about biological resources is the REA (Rapid Ecological Assessment), which enables an inexpensive

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but quick accounting of the natural resources on a refuge to help facilitate additional wildlife-dependent recreation opportunities. For instance, a REA would indicate whether a refuge has abundant and healthy fish for anglers, a key factor for a quality experience.

A visitor who experiences quality wildlife dependent recreation gains a personal bond with the biological community. For example, a quality hunt may begin with the sense of camaraderie between father and son as they pull decoys from the shed, set out camouflage netting and other equipment and prepare shotguns, calls, and thermoses. The drive to the refuge is quiet, the two enjoying one another's company. The mist on the wetland is thick and the call of mallards, widgeon, and a handful of Canada geese pierce the fog. Father and son wade across the dark marsh, birds flushing so close they splash water on their heads. They arrive at the blind, set out the decoys and settle back to watch the morning wake up. In a moment, the whistle of wings is heard overhead, the single note of the drake mallard, and then the squawk of a black crowned night heron as it flies out of the nearby willows. Father and son are connected to the natural process and, as a result, more connected to each other. This is just the start of a great day, just one type of quality recreation opportunity offered by the Refuge System. More than 316 refuges are open to hunting. Each fall, thousands of hunters connect with the natural process as they enjoy these quality experiences, and gain an appreciation of refuges for recreation experiences that are safe, enjoyable, attractive and accessible.

Over the next 15 years, small construction projects will allow visitors to view wildlife in their natural habitat. Observation trails, platforms, restrooms and parking lots, viewing equipment, brochures, nature trails, kiosks and interpretive panels, viewing areas and tour routes will be the norm. Refuge managers will seek partnerships with organizations that promote wildlife conservation. Refuges will provide opportunities for hands-on activities that inspire participants to become involved in habitat restoration and other programs, fostering a sense of stewardship for the Refuge System, wildlife, and habitat resources.

Refuge interpretative programs will provide opportunities for visitors to forge emotional and intellectual connections between the interests of the audience and the inherent meanings of the resource. Environmental education programs will provide opportunities for students to develop an awareness, concern, knowledge, attitude, skill, motivation and commitment to work toward solutions of current environmental problems and the prevention of new ones. Education and interpretation programs will use social science and market research (within the purpose and guidelines of the Refuge System).

6. Lives Are Saved and Natural and Cultural Resources Conserved through Law Enforcement Protection Resources

An appropriate level of law enforcement is needed on refuges to provide public safety and protect refuge resources. Providing wildlife dependent recreation corresponds to a demand for emergency service and law enforcement. Improving wildlife habitat and developing refuge facilities requires that those investments are protected. An effective

law enforcement and security strategy is fundamental to any successful land management program.

An appropriate level of law enforcement is needed on refuges to provide public safety and protect refuge resources.

The following key outcomes are desired:

- Visitor orientation is effective and refuge regulations are clear, resulting in a positive experience for refuge visitors and increasing compliance with regulations.
- An appropriate law enforcement presence is evident so refuge visitors feel safe.
- Refuge visitors are not victimized by crime while visiting the refuge.
- Wildlife is not harassed or otherwise negatively impacted by refuge visitors.
- Refuge facilities are not vandalized or destroyed.
- Cultural resources are not damaged or removed.
- Effective partnerships are in place with law enforcement agencies that have overlapping or adjoining jurisdiction.
- Refuge law enforcement officers are effective ambassadors of the Refuge System; *“proud to serve and ready to protect.”*

Law enforcement officers are often the only staff that visitors see and talk to on a refuge. Therefore, a law enforcement officer has the important role to represent the Refuge System at its best. A priority established by the team was that the NWRS should welcome and orient visitors to help provide a “quality” wildlife dependent recreational experience. Providing assistance to visitors as well as providing protection is necessary.

Defining Success

Successful wildlife dependent recreation programs must be based on clear direction, sound policies, quality recreation facilities, educated and trained staff, improved public use standards and, most especially, a willingness on the part of employees and partners to share in public stewardship for mutual benefit. To describe success, key measures have been identified for each of the essential elements as indicated in Table 1 on the following pages.

Table 1
Key Measures for Success

Essential Element	Outcome at Optimum Condition	Success Factor
Involve Communities and National Partners	<p>1. Managers and staff routinely meet with NGOs and community partners.</p> <p>A Friends organization exists to support every refuge.</p> <p>The Refuge System maintains the capacity to implement national initiatives locally. Each refuge has an approved, well rounded, Visitor Services Plan that meets an agreed upon set of minimum standards.</p>	<p>Local citizens know and respect their local national wildlife refuge. Local citizens volunteer at the refuge and belong to the Friends organizations.</p> <p>National partners with recreation interests in wildlife dependant recreation activities join in a coalition through a charter to define joint projects.</p>
Welcome and Orient Visitors	<p>2. A basic package of standard facility designs and materials to welcome visitors contributes to developing an image and brand. Signs, brochures, Web sites are standardized yet still reflect the uniqueness of each field station. Visitor Facility Enhancements are fully funded and implemented on the ground.</p>	<p>Visitors know where they are whenever they step on a national wildlife refuge. They know what to expect. They have good consistent information available to enhance the quality of their wildlife-dependent recreational experience.</p>
Provide Hunting Opportunities and Fishing Opportunities	<p>3. Wildlife-dependent recreational opportunities are afforded Americans, especially families.</p> <p>The new Recreation Policies are implemented.</p> <p>Hunting and fishing are traditional outdoor activities that are to be facilitated whenever compatible.</p> <p>Hunting and fishing opportunities need to be as unencumbered as possible for visitors.</p> <p>Areas of the refuge open to hunting and fishing, as well as other priority wildlife-dependent recreation, need to be clearly marked. If the Refuge System decides it is valuable to increase a fishing program, for example, then the refuge managers makes the opportunity available in measurable levels of achievement</p>	<p><i>Quality Hunting and Fishing Experience Factors:</i></p> <p>Maximizes safety for hunters, fishermen, and other visitors.</p> <p>Encourages the highest standards of ethical behavior in taking or attempting to take wildlife and catching attempting to catch, and releasing fish.</p> <p>Is available to a broad spectrum of the hunting and fishing public.</p> <p>Provides reasonable challenges and opportunities for taking targeted species under a described harvest objective established by the hunting program.</p> <p>Minimizes the reliance on motorized vehicles and technology designed to increase the advantage of the hunter over the wildlife.</p> <p>Minimizes habitat impacts.</p> <p>Causes no adverse impact on populations of resident or migratory species, native species, threatened and endangered species, or habitat.</p> <p>Creates minimal conflict with other priority wildlife-dependent recreational uses or refuge operations.</p> <p>Incorporates conservation message.</p> <p>Provides reasonable accommodations for individual with disabilities to participate. Reflects positively on the Refuge System.</p>

Table 1
Key Measures for Success (cont'd)

Essential Element	Outcome at Optimum Condition	Success Factor
Provide Wildlife Observation and Wildlife Photography Opportunities	<p>4. Wildlife-dependent recreational opportunities are afforded Americans, especially families.</p> <p>The new Recreation Policies are implemented.</p> <p>Wildlife observation and photography opportunities provide for visitors to view and appreciate the conservation of this Nation's resources.</p>	<p><i>Quality Wildlife-Observation and Photography Factors:</i></p> <p>Observation and photography facilities or programs maximize opportunities to view the spectrum of wildlife species and habitats on the refuge but minimize disturbance to wildlife.</p> <p>Observation and photography opportunities, in conjunction with interpretive and educational opportunities, promote public understanding of an increase public appreciation for America's natural resources and the role of the Refuge System in managing and protecting these resources.</p> <p>Most facilities blend with the natural setting, station architectural style and provide viewing opportunities for all visitors including persons with disabilities.</p> <p>Observers understand and follow procedures that encourage highest standards of ethical behavior.</p> <p>Viewing opportunities exist for broad spectrum of the public.</p> <p>Observers and photographers have minimal conflict with other priority wildlife-dependent recreational uses or refuge operations.</p> <p>Photographic opportunities occur where the least amount of disturbance to wildlife will occur.</p> <p>Observation and photography opportunities incorporate a message of stewardship and conservation.</p>
Provide Environmental Education and Interpretation Opportunities	<p>5. Wildlife-dependent recreational opportunities are afforded Americans, especially families.</p> <p>The new Recreation Policies are implemented.</p> <p>Partnerships with local schools are established to ensure that the service message(s) are correctly incorporated into curriculum standards.</p> <p>Partnerships and programs are provided to communicate the field station's relationship to the local area's past land use and history.</p>	<p><i>Quality Environmental Education and Interpretation Factors:</i></p> <p>Teach awareness, understanding and appreciation of our trust resources.</p> <p>Provide appropriate materials, equipment, facilities, and study locations to support environmental education, where compatible.</p> <p>Education programs allow participants to demonstrate learning through refuge-specific stewardship tasks as well as projects that they can carry over into their everyday lives.</p> <p>Education programs incorporate local, state, and national standards with an emphasis on wildlife conservation.</p> <p>Interpretive programs develop a sense of stewardship leading to actions and attitudes that reflect concern and respect for wildlife resources, cultural resources, and the environment.</p> <p>Interpretive programs are safe, enjoyable, accessible and meaningful to visitors.</p>

Table 1
Key Measures for Success (cont'd)

Essential Element	Outcome at Optimum Condition	Success Factor
Protect Visitors, Natural and Cultural Resources	6. Refuge law enforcement is adequate to ensure that laws and policies are abided by for protection of visitors and resources.	Visitors are safe and the resources are protected

Assessing Current Condition -- Where Are We Today?

Wildlife Dependent Recreation Element	Current Condition Class
Involve Communities and National Partners	Class 3 – Inadequate
Welcome and Orient Visitors	Class 3 – Inadequate
Provide Hunting and Fishing Opportunities	Class 3 – Inadequate
Provide Wildlife Observation and Wildlife Photography Opportunities	Class 3 – Inadequate
Provide Environmental Education and Interpretation Opportunities	Class 3 – Inadequate
Protect Visitors, Natural and Cultural Resources	Class 4 – Critical

Rationale for the above ratings follows:

Involve Communities and National Partners

The Refuge System has not defined its unique niche with the American public.

A recent survey by KRC Research revealed that less than 60 percent of respondents considered community relations of primary importance to the Refuge System, indicating that employees may not realize the benefits of a good neighbor relationship to wildlife conservation. This reflects the Service's long-standing work ethic since habitat work on a refuge is demanding and within a defined boundary. However, a successful second century of conservation will demand strong community relations and broad citizen support. A slight cultural shift will be inevitable.

With 250 Friends organizations, the Refuge System is making progress in involving communities in land management decision-making. Friends, nonprofit organizations established to support individual refuges and with a membership of volunteers, are helping refuges become relevant to communities. The Friends movement, initiated in 1993, has proven that local citizens care deeply about wildlife conservation on refuges. The movement has grown from about 20 Friends groups in 1993, to 70 in 1996, to 250 today. The breadth of Friends' contribution has grown well beyond the traditional greeting duty to becoming a profitable business partner as well as habitat conservation partner. Workshops for Friends groups on how to start and manage a nonprofit organization and how to partner with the NWRS are popular and serve as cornerstones, as do mentoring programs. Provided the opportunity, local citizens are embracing the Friends movement.

Volunteers are citizens in local communities. They are lifelines into communities – carrying the conservation message and engaging support to meet the refuge's mission. Volunteers provide 1.5 million hours of work each year, equal to about 721 full-time employees. They do everything from drive tractors in habitat restoration projects to manage Friends' bookstores, to inventory and monitor plants and wildlife, to provide pro bono accounting, biology, and database/computer expertise, to leading bird tours. In 1998, there were 28,000 volunteers, a 675 percent increase since 1982. In 2003, more than 39,000 volunteers supplemented the FWS workforce.

A more thorough examination of the Refuge System recreation programs, facilities, and opportunities is needed within the next five years.

There are only a handful of concessionaires working with refuges. Successful business partnerships are important for future communications and recreation delivery systems. Staff shortages are critical; concessionaire partners would be great assets. The concession program is in its infancy and the possibilities for partnership need to be explored and developed. Mentor programs would be helpful.

The new recreation policies, expected this summer, will be very helpful in involving community partners and national partners to deliver quality wildlife dependent recreation opportunities. With official policy in place, the framework to parlay partnerships will be constructed; delivery systems for quality wildlife dependent recreation can then be constructed.

Banking on Nature 2002: The Economic Benefits to Local Communities of National Wildlife Refuge Visitation, published by the Fish and Wildlife Service, calculated the big boost that refuge recreation gives to local economies. The more than 35.5 million visits to the nation's refuges fueled more than \$809 million in sales of recreation equipment, food, lodging, transportation, and other expenditures in 2002, according to the study. That figure is more than double the \$401.1 million generated in 1995. As refuges generated recreation spending, nearly 19,000 jobs were created and more than \$318 million were generated in employment income. The 2002 employment statistics were nearly double the 1995 figures.

The total for sales and tourism-related revenue plus employment income equaled \$1.12 billion, nearly four times the \$320 million that the Refuge System received in FY 2002 for operations and maintenance. In FY 2004, 50 additional refuges will be examined, providing further evidence that refuges are relevant to local economies.

Welcome and Orient Visitors

In 1998, 33.3 million recreation visitors came to wildlife refuges. In 2003, that number jumped to 39.6 million, with fishing, wildlife observation and education and interpretation the most popular activities.

Visitors find national wildlife refuges, but too many have no idea that they are on a refuge or know what a refuge is. Where do refuge visitors come from? Surveys show that the average distance traveled by a visitor is 32 miles. Most, about 48 percent, learned about the refuge through word of mouth; 24.6 percent saw a highway sign, and about 24 percent used various other means. More than 80 percent of visitors have attended college, a demographic that is important to better understand the refuge visitor.

The Refuge System has been unable to brand itself effectively with the American public. To promote the Refuge System and garner support across the hundreds of communities where refuges exist, the Refuge System must be recognized by people, regardless of where they travel. The lack of a strong brand – enhanced by standardized signage and brochures, visitor contact points with a consistent

appearance and message and consistent wildlife-dependent recreation programs – limits the ability of the Refuge System to increase recognition and support. Nearly 85 percent of visitors said that refuge maps and signs made it easier to find the refuge.

Today, the Refuge System is implementing a new visitor facility enhancement program, small construction projects to get people on the land and oriented to the refuges' wildlife treasures. The FWS Real Property Inventory lists 2,625 small visitor facilities on refuges. A new database inventories these opportunities on all refuges. There are \$31 million worth of projects on 194 refuges, including 182 walking trails, 211 kiosks, 145 interpretive signs, 10 boat ramps and 30 observation towers.

By deliberately creating an image and appropriate programs that meet visitor expectations, the Refuge System will shape its image so visitor expectations evolve in a manner consistent with the conservation mission.

The Refuge System implemented a standardized kiosk design last year to unify its image. The Refuge System developed a model used for all visitor center proposals. Facility components, entered at many scales, are put into the electronic model to generate cost estimates. This model is helpful in letting Congress know the cost of a facility they may support and in showing the cost savings of visitor facility enhancements as compared to expansive buildings.

Finally, having a professional and courteous cadre of staff, volunteers and partners available to answer questions and assist the public is optimal.

Each element – from kiosks to entry signs – contributes to the development of a Refuge System brand. The brand may be characterized by pristine scenery or wildlife spectacles but should always include knowledgeable, friendly contacts and the facilities conducive to meet visitor expectations. Once people learn to expect certain appealing elements from the Refuge System, they will be able to speak to the value and benefits of the Refuge System. By deliberately creating an image and appropriate programs that meet visitor expectations, the Refuge System will shape its image so visitor expectations evolve in a manner consistent with the conservation mission. Developing a brand requires reinforcement of this personal appeal and solidifies the importance of the refuge among potential supporters. Furthermore, a brand gains strength over time, and the impact grows exponentially.

Good communication requires strategically placed information about the Refuge System, describing the opportunities available and the value to the American people. Communication strategies should be rooted in user satisfaction and preference surveys, demographic and market research, and reflect basic marketing principles. The Refuge System should deliver pertinent information to a variety of audiences, including internal and targeted external groups. Reaching the “general public” is not a measurable goal. The Refuge System has implemented a Refuge Management Information System database to improve how recreation visitors are counted and to understand which activities they seek, elements that are helpful in better planning quality recreation.

Fulfillment of goals should be placed into a reasonable timeframe. For example, the nation's nearly 14 million hunters represent an important traditional element of the nation's conservation history, yet many have never heard of the Refuge System.

*Sportsmen have
been among
the Refuge
System's most
avid and active
supporters for
decades.*

Therefore, the Refuge System should seek to reach 25 percent of hunters during a three-year period, providing repetitive messages that motivate them to learn about refuge hunting programs. Communicating with the audience simply to “build awareness” is neither measurable nor necessarily beneficial. Building awareness does not motivate an audience to take any action, such as visiting a refuge, writing a Congressman or volunteer services. The Refuge System must inform all segments of its organization about the goals, benefits and purposes of increasing communications.

In 2002, 90 percent of refuge visitors reported they were very satisfied with their experiences on refuges. Another visitor satisfaction survey will be completed in 2004 to inform the Refuge System about visitor demographics and expectations. The data will be useful in determining how best to welcome and orient visitors.

Because visitor capacity is often discussed in terms of the land’s “carrying capacity,” a team has been formed to develop guidance and tools for analyzing and managing thresholds. The Refuge Improvement Act mandates that the Refuge System facilitate compatible priority public uses. Threshold models will help do that in ways that provide quality experiences and show that the wildlife is not negatively impacted.

Providing Hunting and Fishing Opportunities

Sportsmen (hunters and anglers) have been among the Refuge System’s most avid and active supporters for decades. They have contributed tremendously towards improving habitat and new opportunities to hunt and fish on hundreds of refuges across the country. Since 2000, approximately 36 refuges have been opened to new hunting and fishing. In 1997-1998, 276 refuges were open to hunting; in 2003-04, the number rose to 316 refuges. In 1997-98, 236 refuges were open to fishing; in 2003-04, the number rose to 275 refuges. In 2003, 2.2 million people hunted and 6.6 million people fished.

Approximately 44 million anglers in the U.S. spent \$41.5 billion in retail sales, contributing \$7.3 billion in state and federal taxes and creating more than 1 million jobs, according to Sportfishing in America, 2001. The report further states that more Americans fish than play golf and tennis combined. In FY 2003, 4.4 million people participated in freshwater fishing and 2.3 million in saltwater fishing on refuges, an increase of approximately 15 percent and 20 percent respectively from 1998.

According to the Economic Importance of Hunting in America, 2002, there were nearly 14 million hunters in the US. Of these, 10,272,000 only hunted deer, 2,956,000 only hunted migratory birds, and 3,184,343 were upland game hunters only. Travel and equipment expenditures during 2001 totaled \$24,708,970,000. More than 1 million people hunted waterfowl on Refuge System land in 2003, while 530,000 hunted upland game and 724,000 hunted big game.

Knowing the recreation customer is important in designing quality experiences and in determining target audiences. Nearly three-quarters of Refuge System visitors indicated positive experiences for hunting and fishing, and 94.1 percent reported

positive experiences for wildlife observation and photography. The Refuge System must find out why visitors were less satisfied with hunting and fishing opportunities so it can determine how to make these experiences better.

Some refuge managers have identified population surveys, aquatic vegetation control and habitat restoration as elements most needed to support angling. In fact, the Refuge Operating Needs (RONS) database inventories boat ramps, vegetation control, water control structures and fishing piers as projects necessary to support quality fishing experience. The overall management goal is for a quality fishery, not producing trophy fisheries. Towards this goal, collaborative work with the FWS Fisheries Resources program and state conservation agencies to prioritize needed population surveys would be helpful.

Building appropriate and quality hunting, fishing, wildlife dependent observation and photography, and environmental education and interpretation programs to recruit new wildlife conservationists while providing family fun is a complex task.

Further, a partnership to develop and implement a National Aquatic Management Plan would help attain the goal of quality fishing opportunities on refuges. The basic place to begin addressing opportunities for anglers is to ensure that the CCP process on every refuge addressing fishing opportunities and includes the local community in planning. Again, state cooperation through agency outreach for angling would help promote quality fishing opportunities. Currently, the Refuge System does not generally monitor outcomes of fishing programs. Knowing the number of angling days in the Refuge System, angler satisfaction, the numbers of acres of improved fish habitat, or the nature and health of fish populations would contribute to developing better fishing opportunities.

While more sportsmen visit refuges each year, the increase is modest as compared to other wildlife-dependent recreation activities. This may reflect an overall U.S. recreation trend. It may also indicate that opportunities have been maximized because most refuges suitable for hunting and fishing already offer these activities, refuge programs and facilities are properly managed to enhance quality opportunities for hunting and fishing, or a combination of these factors.

A more thorough examination of Refuge System recreation programs, facilities, and opportunities is needed within the next five years to determine if quality wildlife dependent recreation has been maximized in a manner that is responsive to the Improvement Act.

Providing Wildlife Observation and Wildlife Photography Opportunities

According to numerous recreation trends studies, observing and appreciating wildlife is one of the fastest growing recreation endeavors in the United States. The refuge system has 680 miles of foot trails and boardwalks on refuges that provide observation and photography opportunities. In 2003, nearly 26 million people walked along nature trails and used observation areas and photo blind on refuges, nearly 20 percent more than in 2000. Unlike other wildlife-dependent recreation programs (interpretation and environmental education), observation and photography do not necessarily need to be facilitated by employees, partners or volunteers. Due to ISTEA and TEA-21 funding,

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moment he
steps onto any
refuge.*

more than 650 public roads and parking projects have been completed, worth almost \$79 million. While there is much yet to be accomplished, the Refuge System has created additional access to wonderful recreational opportunities.

Although it is difficult to determine the exact scope of wildlife observation and photography activities, they probably occur to some extent on almost every staffed refuge. While useful information is available on visitors who use basic scale refuge facilities (trails, boardwalks, photo blinds) for these recreational pursuits, a more thorough examination is needed within the next five years to determine if the Refuge System is providing sufficient opportunities to meet increasing demands and visitor expectations, both through self-conducted and organized programs.

Providing Environmental Education and Interpretation Opportunities

In 2003, approximately 13 million visitors participated in environmental education and interpretative programs on refuges. Another 26 million people were reached through a variety of education, interpretive and outreach programs offered at other locations, such as schools and community events. Both totals increased significantly since 2000. Due to the growing demand for education opportunities, the Refuge System has contracted for baseline data on education programs conducted on refuges, helping to determine how to build and deliver a core education program with consistent messages at the lowest possible cost.

Education and interpretation programs connect visitors to resources, helping people understand and appreciate the importance of natural and cultural resources. Visitors should receive messages about Refuge System resources through a variety of media, including interpretive trails and boardwalks, wildlife centers and visitor contact stations, talks and walks, audiovisual productions, publications, and exhibits. Current programs are offered in a variety of formats and contents that lack consistent messages. Refuge staff should be encouraged to coordinate their interpretive programs and materials with applicable local, state, and federal programs and to take advantage of partnerships. Interpretive materials should relate enough information to introduce concepts and ideas, pique visitors' interest, and allow visitors to develop their own conclusions. Well-designed interpretive services can be one of the most effective and inexpensive resource management tools, helping people understand how they can minimize resource damage and wildlife disturbance.

Outdoor classrooms are sites of structured environmental education activities that: focus on the natural environment, come from an approved course of study with identified learner outcomes; and are hands-on, and involve Refuge System lands. Currently, there is no system-wide or national platform. A national needs assessment is being conducted, after which a national education program can be planned.

Unlike some other wildlife dependent recreation activities, interpretive and educational activities often require facilitation either by refuge staff or volunteers and schools. Programs also usually rely on refuge facilities such as visitor center exhibit areas and classrooms, contact stations, and kiosks. While refuges are ideal "outdoor classrooms,"

more emphasis needs to be placed on finding ways to involve partners and schools in offering education programs and moving interpretive programs out-of-doors.

A more thorough examination of existing education and interpretive programs is needed within the next five years to ensure they consistently use key Refuge System messages, employ brand identity, and meet professional and community educational standards.

*The ability of
refuge staff to
perform both
their primary job
and the law
enforcement
role diminished.*

Protect Visitors and Natural and Cultural Resources

A deployment plan is being developed by a contractor for the Refuge System to forecast how many full-time refuge law enforcement officers are needed and where they should be placed. The Refuge System is woefully understaffed in law enforcement officers. As collateral duty officers are phased out and the law enforcement program moves to professional, full-time officers, vacancies will occur, leaving some refuges without any law enforcement. Hiring new recruits and the 16 weeks required for training take time and money. Funding for law enforcement officers and official training is critical.

Measuring Progress

Measuring progress toward implementing successful wildlife dependent recreational opportunities on refuges will be monitored through a condition assessment process.

Standardized condition classes are proposed to provide a consistent method to assess an individual field station's abilities to implement quality wildlife dependent recreational programs. Draft criteria are listed in Attachment 1 for each of the four essential elements. For each essential element, assessment criteria are provided for five condition classes:

- Condition Class 1 – Optimal (continue successful efforts)
- Condition Class 2 – Adequate (meets the requirement)
- Condition Class 3 – Inadequate (needs action)
- Condition Class 4 – Critical (needs immediate action)
- Condition Class 5 – Unknown

Conservation in Action Summit participants and reviewers of this document are encouraged to recommend refinement or modification of the performance criteria displayed in Appendix 1 through 5 so that the criteria best reflect the most meaningful measure of success.

**Relationship to
Nationwide
Conservation Efforts**

Fulfilling the mandates of the Improvement Act to provide quality wildlife-dependent recreational opportunities on refuges dovetails completely with nationwide conservation efforts. In addition, many refuges have partnerships with national conservation organizations to plan, implement, and facilitate wildlife-dependent recreational opportunities.

Where Do We Start?

Finding the starting point of any major, long-term project requires a clear understanding of the ultimate goals. The team envisioned success in 15 years in terms of providing quality wildlife dependent recreational opportunities for citizens. They conceptualized groundwork, noting the requirement of partner support in both the community and national arenas. They insisted that communications to visitors make them feel welcome and orient them. All agreed that making visitors safe is a basic ground rule. The need to incorporate social science research, demographics, and recreational research into building new and better programs is also a basic requirement according to the team. Building appropriate and quality hunting, fishing, wildlife dependent observation and photography, and environmental education and interpretation programs to recruit new wildlife conservationists while providing family fun is a complex task.

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If the institution is not accustomed to dealing with people at the local or national level, each refuge manager should ask each morning how a phone call to a person outside the normal sphere of influence could promote the refuge's biological work. It's a start and a twist in the paradigm that can lead to big results over time at 544 national wildlife refuges. The Refuge System must institutionalize the process of including community members in land management decision-making to build a network of public supporters.

The next step is to *listen* to people and consider their points of view, never losing sight of the Refuge Improvement Act, *Fulfilling the Promise*, or the responsibility to conserve wildlife. People add knowledge, skills and talents, and even changes in business practices that can create efficiencies and support when finances are otherwise unsettled.

Not all starting points require more funding. Even a slight cultural change can bring a huge return on investment. Another cost effective starting point is to implement the new Recreation Policies. Long on the drawing board, a set of approved Recreation Policies could bring consistency in standards and programs across this vast network of refuge lands. In return, the product "delivery of quality wildlife dependent experience" would be greatly enhanced.

Exploring the delivery system for compatible wildlife dependent recreation leads one to ask how an organization built on biological percepts can best get help in this endeavor. One approach may be to tap into the expertise of business partners who share the sense of passion for wildlife conservation and who have proven experience in running a profitable business that engenders visitor support but has minimal impact on wildlife. Years and years of discussions, proposed legislation, lack of policy, and other factors have greatly hindered advancement in this arena, where the Refuge System should be

playing a pivotal role. A mentor program for potential business partners could be helpful.

Another starting point is to standardize the design of entrance signs, trail signs, kiosks, visitor contact stations, brochures, and the spectrum of communication tools and small facilities that make visitors welcome and orient them on how to have a quality wildlife dependent recreational experience. If the Refuge System displays a consistent image, every visitor will know here he is the moment he steps onto any refuge. The new sign manual will be a big help. By branding its identity, the Refuge System can cultivate a new generation of wildlife conservationists as they travel from refuge to refuge. Refuges need to take current standards seriously and enforce policy guidelines at the refuges.

*Increasing the
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The new Visitor Facility Enhancement Program that funds small construction projects on refuges to enable visitors to have a quality experience is a great first start. Boat ramps, piers, nature trails, observation towers, boardwalks, parking lots, kiosks, interpretive displays are supported by the program. Continuation of programs that get people out on the land and restrict large sums of money for visitor centers would be a good thing.

Increasing the number of full-time refuge law enforcement officer is absolutely critical to providing quality wildlife dependent recreation and making visitors safe. Training officers in the uniqueness of Natural Resource Law Enforcement is necessary to make this a success story.

The team looked at how the suggested outputs computed to successful outcomes. Measuring the number of hunting or angling days, knowing the population of the hunted or fished species on the refuge, and knowing the number of acres of habitat could help translate into a quality experience. Quality was a word frequently discussed and everyone agreed greater visitor satisfaction would lead to greater support for the refuge mission and wildlife conservation. Visitors must be educated about that mission.

A “quality experience” does not necessarily equate to a larger “take.” Rather, it could mean that wildlife was readily available wildlife, habitat was in good condition, facilities were plentiful, good information was available about how to get around the refuge to the wildlife, recreation was accessible to the disabled, or that a uniformed refuge employee talked to visitors. A suite of conditions can add up to a quality experience. The first step is agreeing on what quality means. The team supported that which appears in the chart above. Having productive habitat with wildlife will thrill new visitors, but retaining them as repeat visitors requires more planning and on a sustained level.

Another step to well orchestrated, compatible wildlife dependent recreation on wildlife refuges is a commitment by those on refuges and those in positions of authority in regional offices and Headquarters to hire professionals who know how to design, plan, and implement quality recreation programs. Environmental education specialists should

not just carry the title, but also the education and experience the title connotes. Similarly, park rangers should be educated and trained in the profession, not people placed in these positions because of their outgoing personality or other such characteristics. Highly qualified staff will likely increase the quality of a visitor's experience.

Law Enforcement

Historically, the Refuge System relied on staff to conduct law enforcement as a collateral duty. While that model worked effectively in the past, demands on managers, biologists, and maintenance staff have increased dramatically in recent years. Refuge staffs are facing increasingly difficult choices regarding what important work will go undone. The ability of refuge staff to perform both their primary job and the law enforcement role diminished. Equally relevant, law enforcement in today's world is changing. The investments in time and training required to succeed in this evolving profession require a full-time approach. In response, the Refuge System has begun to transition to a workforce of full-time law enforcement officers.

The Refuge System has approximately 150 full-time Refuge Officers and 350 dual-function Refuge Officers. These officers provide law enforcement on more than 530 national wildlife refuges. To achieve identified goals and outcomes, more law enforcement resources will be needed. To understand the extent of the current law enforcement deficit, the Refuge System has contracted with the International Association of Chiefs of Police to develop a "law enforcement assessment and deployment model." That model objectively quantifies each refuge's law enforcement needs by establishing a "suggested officer staffing level." Law enforcement support provided by partnering agencies is taken into account. Each refuge will apply the model in 2004 and the collective results will be used to develop a baseline from which to measure progress. The desired result is full implementation of the model's recommendations.

In addition to the staffing shortage, the Refuge System's law enforcement program lacks an automated case management system. The Department of the Interior has mandated the development of this capability according to its guidelines and standards. Development and implementation of this system should be considered another important benchmark for refuge law enforcement.

Appendix I

Condition Assessment Criteria -- Condition Class 1

Quality Wildlife-Dependent Recreation

Condition	Essential Elements					
	Law Enforcement	Involve Community and National Partners	Welcome and Orient Visitors	Provide Quality Hunting and Fishing	Provide Quality Wildlife Observation and Photography	Provide Quality Environmental Education and Interpretation
Condition Class 1	<p>100 percent of refuges have the law enforcement resources needed as indicated by the Law Enforcement Assessment and Deployment Model. These law enforcement resources are provided by the Service and/or through effective partnering with other law enforcement agencies that have overlapping or adjacent jurisdictions.</p> <p>Law enforcement, security, and emergency response capabilities are sufficient to address all public safety and resource protection needs.</p> <p>The crime rate is decreasing or stabilized at a low rate.</p> <p>90-100 percent of the Refuge Law Enforcement Zones are staffed with a Zone Officer.</p> <p>All cases and incidents are being entered into an automated case management system that can be managed nationally.</p>	<p>Communities: Volunteer and local communities to deliver W-D recreation on the 40% of refuges not staffed.</p> <p>Every staffed refuge has an active Friends Organization.</p> <p>Every refuge and Waterfowl Production Area that is open to public use has an approved visitor services plan that meets the VS standards, with meaningful public involvement.</p> <p>Refuges communicate regularly with local communities/ constituents through news releases and other means. Field stations provide volunteer opportunities and encourage participation in refuge stewardship.</p> <p>Work with chambers of commerce and local tourism bureaus. Be active in the planning commissions and zoning committees.</p> <p>National Partners: A charter of national partners to reach common goals.</p> <p>National initiatives that benefit local refuges.</p> <p>Local chapters are involved on refuges.</p> <p>Work with State counterparts to develop shared priorities.</p>	<p>100 percent of refuges and Waterfowl Production Areas have consistent signage, brochures, and basic accessible visitor facilities. All vehicles standard white with standard emblems. All staff in uniform on refuges. A courteous and professional staff member, volunteer, or friends group member is available to meet and answer the questions of visitors.</p> <p>100 percent of refuges have up-to-date and standardized Web sites, brochures, maps, and signage.</p> <p>Basic facilities include: kiosk, parking, trails, observation point, rest rooms, water and are accessible.</p> <p>Visitors can find the refuge from the nearest highway or local community.</p>	<p>Wildlife-dependent recreation programs are tailored to provide people with quality outdoor experiences. 100 percent of all refuges where hunting or fishing is compatible are open and facilitating quality programs. Increased access for compatible hunting and fishing recreation.</p> <p>Hunting and fishing programs serve a wide range of audiences (youth, disable, women, elderly).</p> <p>Hunting and fishing programs are accessible in both facilities and activities offered.</p> <p>Refuges provide events to encourage participation in hunting and fishing activities for new audiences, such as fishing days, hunter education, opportunities, etc.).</p>	<p>Wildlife-dependent recreation programs are tailored to provide people with quality outdoor experiences. 100 percent of all refuges where wildlife observation and photography is compatible are open and facilitating quality programs. Increased access for compatible wildlife observation and photography recreation.</p> <p>Facilities are accessible and programs in place to enhance the experience (i.e. birding classes, photography clinics, etc.).</p>	<p>Wildlife-dependent recreation programs are tailored to provide people with quality outdoor experiences. 90 percent of all refuges where environmental education and interpretation is compatible are open and facilitating quality programs.</p> <p>Environmental education staff is qualified and working with local schools to develop curriculum.</p> <p>Programs reach broad range of audiences in age and socio-economics.</p> <p>Programs include core messages.</p>

Appendix II

Condition Assessment Criteria -- Condition Class 2

Quality Wildlife-Dependent Recreation

Condition Class	Essential Elements					
	Law Enforcement	Involve Community and National Partners	Welcome and Orient Visitors	Provide Quality Hunting and Fishing Opportunities	Provide Quality Wildlife Observation and Photography Opportunities	Provide Quality Environmental Education and Interpretation Opportunities
Condition Class 2 Adequate	<p>80-89 percent of refuges have the law enforcement resources needed as indicated by the Law Enforcement Assessment and Deployment Model. These law enforcement resources are provided by the Service and/or through effective partnering with other law enforcement agencies that Condition 2 (have overlapping or adjacent jurisdictions.</p> <p>Law enforcement, security, and emergency response capabilities are sufficient to address most public safety and resource protection needs.</p> <p>The crime rate is moderate, decreasing and/or beginning to stabilize.</p> <p>80-89 percent of the Refuge Law Enforcement Zones are staffed with a Zone Officer. All cases and incidents are being entered into an automated case management system that can be managed nationally</p>	<p>Communities: 70-89 percent of refuges and Waterfowl Production Areas have up-to-date and standardized Web sites, brochures, maps, and signage.</p> <p>Every refuge and Waterfowl Production Area that is open to public use has an approved, public use plan that meets the VS standards, with meaningful public involvement.</p> <p>Refuges and Waterfowl Production Areas communicate regularly with local communities/constituents through news releases and other means. Field stations provide volunteer opportunities and encourage participation in refuge stewardship.</p> <p>National Partners: A national charter of partners with common goals.</p> <p>National initiatives benefit local refuges.</p> <p>Local chapters are involved on refuges.</p>	<p>70-89 percent of refuges and Waterfowl Production Areas have consistent signage, brochures, and small accessible visitor facilities. A courteous and professional staff member, volunteer, or friends group member is available to meet and answer the questions of visitors.</p> <p>Basic facilities include: kiosk, parking, trails, observation point, rest rooms, water and are accessible.</p> <p>Visitors can find the refuge from the nearest highway or local community.</p>	<p>Wildlife-dependent recreation programs are tailored to provide people with quality outdoor experiences. 70-89 percent of all refuges where hunting or fishing is compatible are open and facilitating quality programs</p> <p>Hunting and fishing programs serve a wide range of audiences (youth, disable, women, elderly).</p> <p>Hunting and fishing programs are accessible in both facilities and activities offered.</p> <p>Refuges provide events to encourage participation in hunting and fishing activities for new audiences, such as fishing days, hunter education.</p>	<p>Wildlife-dependent recreation programs are tailored to provide people with quality outdoor experiences.</p> <p>70-89 percent of all refuges where wildlife observation and photography is compatible are open and facilitating quality programs.</p> <p>Facilities are accessible and programs in place to enhance the experience (i.e. birding classes, photography clinics, etc.).</p>	<p>Wildlife-dependent recreation programs are tailored to provide people with quality outdoor experiences.</p> <p>70-89 percent of all refuges where environmental education and interpretation is compatible are open and facilitating quality programs.</p> <p>Environmental education staff is qualified and working with local schools to develop curriculum.</p> <p>Programs reach a broad range of audiences (i.e. age, socio-economics, etc.).</p> <p>Programs include core messages.</p>

Appendix III

Condition Assessment Criteria -- Condition Class 3

Quality Wildlife-Dependent Recreation

Condition Class	Essential Elements					
	Law Enforcement	Involve Community and National Partners	Welcome and Orient Visitors	Provide Quality Hunting and Fishing Opportunities	Provide Quality Wildlife Observation and Photography Opportunities	Provide Quality Environmental Education and Interpretation Opportunities
Condition Class 3 Inadequate	<p>60-79 percent of refuges have the law enforcement resources needed as indicated by the Law Enforcement Assessment and Deployment Model. These law enforcement resources are provided by the Service and/or through effective partnering with other law enforcement agencies that have overlapping or adjacent jurisdictions.</p> <p>Law enforcement, security, and emergency response capabilities are not sufficient to address public safety and resource protection needs. Most available law enforcement resources are focused on public safety and to protect government property. Crimes against wild-life, natural and cultural resources receive limited attention.</p> <p>The crime rate is moderate to high, may be increasing, or is unknown</p> <p>60-79 percent of the Refuge Law Enforcement Zones are staffed with a Zone Officer.</p> <p>Most cases and incidents are being entered into an automated case management system that can be managed nationally</p>	<p>Communities: 40-69 percent of refuges and Waterfowl Production Areas have up-to-date and standardized Web sites, brochures, maps, and signage.</p> <p>Every refuge and Waterfowl Production Area that is open to public use has an approved public use plan that meets the VS standards, with meaningful public involvement.</p> <p>Refuges and Waterfowl Production Areas communicate regularly with local communities/constituents through news releases and other means.</p> <p>Field stations provide volunteer opportunities and encourage participation in refuge stewardship.</p> <p>National Partners: No national charter of partners with common goals.</p> <p>National initiatives benefiting local refuges are not in place.</p> <p>Local chapters are not involved on refuges.</p>	<p>40-69 percent of refuges and Waterfowl Production Areas have consistent signage, brochures, and small, accessible visitor facilities.</p> <p>A courteous and professional staff member, volunteer, or friends group member is available to meet and answer the questions of visitors.</p> <p>Basic facilities include: accessible kiosk, parking, trails, observation point, rest rooms, and water</p> <p>Visitors can find the refuge from the nearest highway or local community.</p>	<p>Wildlife-dependent recreation programs are tailored to provide people with quality outdoor experiences.</p> <p>40-69 percent of all refuges where hunting or fishing is compatible are open and facilitating quality programs.</p> <p>Hunting and fishing programs serve a wide range of audiences (i.e. youth, disabled, women, elderly).</p> <p>Hunting and fishing programs are accessible in both facilities and activities offered.</p> <p>Refuges provide events to encourage participation in hunting and fishing activities for new audiences (i.e. fishing days, hunter education opportunities, etc.)</p>	<p>Wildlife-dependent recreation programs are tailored to provide people with quality outdoor experiences.</p> <p>40-69 percent of all refuges where wildlife observation and photography is compatible are open and facilitating quality programs.</p> <p>Facilities are accessible and programs in place to enhance the experience (i.e. birding classes, photography clinics, etc.)</p>	<p>Wildlife-dependent recreation programs are tailored to provide people with quality outdoor experiences.</p> <p>40-69 percent of all refuges where environmental education and interpretation is compatible are open and facilitating quality programs.</p> <p>Environmental education staff are qualified and work with local schools to develop curriculum.</p> <p>Programs reach a broad range of audiences (i.e. age, socio-economics, etc.)</p> <p>Programs include core messages</p>

Appendix IV

Condition Assessment Criteria -- Condition Class 4

Quality Wildlife-Dependent Recreation

Condition Class	Essential Elements					
	Law Enforcement	Involve Community and National Partners	Welcome and Orient Visitors	Provide Quality Hunting and Fishing Opportunities	Provide Quality Wildlife Observation and Photography Opportunities	Provide Quality Environmental Education and Interpretation Opportunities
Condition Class 4 Critical	<p>Less than 59 percent of refuges have the law enforcement resources needed as indicated by the Law Enforcement Assessment and Deployment Model. Some law enforcement resources are provided by the Service. The level of support received through partnering with other law enforcement agencies that have overlapping or adjacent jurisdictions is either unknown or has not been nurtured.</p> <p>Law enforcement, security, and emergency response capabilities are not sufficient to address public safety and resource protection needs. Available law enforcement resources are focused on public safety and to protect government property. Crimes against government property, wildlife, natural and cultural resources receive limited attention. Law enforcement is mostly reactive, with little time for a proactive approach.</p> <p>The crime rate is high, may be increasing, or is unknown</p> <p>50-69 percent of the Refuge Law Enforcement Zones are staffed with a Zone Officer. As staffing allows, cases and incidents are entered into an automated case management system that can be managed nationally.</p>	<p>Communities: Less than 40 percent of refuges have up-to-date and standardized Web sites, brochures, maps, and signage.</p> <p>Every refuge that is open to public use does not have an approved public use plan that meets the VS standards, with meaningful public involvement.</p> <p>Refuges and Waterfowl Production Areas do not communicate regularly with local communities/constituents through news releases and other means.</p> <p>Field stations provide volunteer opportunities and encourage participation in refuge stewardship.</p> <p>National Partners: No national charter of partners with common goals.</p> <p>National initiatives benefiting local refuges are not in place.</p> <p>Local chapters are not involved on refuges.</p>	<p>Less than 40 percent of refuges have consistent signage, brochures, and small, accessible visitor facilities.</p> <p>A courteous and professional staff member, volunteer, or Friends group member is available to meet and answer the questions of visitors.</p> <p>Basic facilities include: accessible kiosk, parking, trails, observation point, rest rooms, and water</p> <p>Visitors can find the refuge from the nearest highway or local community.</p>	<p>Wildlife-dependent recreation programs are tailored to provide people with quality outdoor experiences.</p> <p>Less than 40 percent of all refuges where hunting or fishing is compatible are open and facilitating quality programs.</p> <p>Hunting and fishing programs do not serve a wide range of audiences (i.e. youth, disabled, women, elderly).</p> <p>Hunting and fishing programs are not accessible in both facilities and activities offered.</p> <p>Refuges provide few events to encourage participation in hunting and fishing activities for new audiences (i.e. fishing days, hunter education opportunities, etc.).</p>	<p>Wildlife-dependent recreation programs are tailored to provide people with quality outdoor experiences.</p> <p>Less than 40 percent of all refuges where wildlife observation and photography is compatible are open and facilitating quality programs.</p> <p>Facilities are not accessible and programs in place to enhance the experience (i.e. birding classes, photography clinics, etc.).</p>	<p>Wildlife-dependent recreation programs are tailored to provide people with quality outdoor experiences.</p> <p>Less than 40 percent of all refuges where environmental education and interpretation is compatible are open and facilitating quality programs.</p> <p>Environmental education staff are not fully qualified and work with local schools to develop curriculum.</p> <p>Programs do not reach a broad range of audiences (i.e. age, socio-economics, etc.).</p> <p>Programs include core messages.</p>

Appendix V

Condition Assessment Criteria -- Condition Class 5

Quality Wildlife-Dependent Recreation

Condition Class	Essential Elements					
	Law Enforcement	Involve Community and National Partners	Welcome and Orient Visitors	Provide Quality Hunting and Fishing Opportunities	Provide Quality Wildlife Observation and Photography Opportunities	Provide Quality Environmental Education and Interpretation Opportunities
Condition Class 5 Unknown	<p>Refuges have not assessed or quantified the law enforcement resources needed to provide for public safety and resource protection. Some law enforcement resources are provided by the Service. The level of support received through partnering with other law enforcement agencies that have overlapping or adjacent jurisdictions is unknown.</p> <p>The severity, nature, and incidence of crime is largely unknown. Resources for law enforcement, security, and emergency response are deployed without planning, in a reactionary way, and most cases are handled opportunistically.</p> <p>Cases and incidents are not entered into an automated case management system that can be managed nationally.</p>	<p>Communities: It is unknown how many refuges have up-to-date and standardized Web sites, brochures, maps, and signage.</p> <p>It is unknown how many refuges are open to public use or whether it has an approved public use plan that meets the VS standards, with meaningful public involvement.</p> <p>It is unknown whether refuges and Waterfowl Production Areas communicate regularly with local communities/constituents through news releases and other means.</p> <p>It is unknown whether field stations are providing volunteer opportunities and encourage participation in refuge stewardship.</p> <p>National Partners: No national charter of partners with common goals.</p> <p>National initiatives benefiting local refuges are not in place.</p> <p>Local chapters are not involved on refuges.</p>	<p>Less than 10 percent of refuges have consistent signage, brochures, and small, accessible visitor facilities.</p> <p>It is unknown whether a courteous and professional staff member, volunteer, or friends group member is available to meet and answer the questions of visitors.</p> <p>No assessment regarding status of basic facilities has been completed.</p>	<p>No assessment of hunting and fishing programs have been completed to determine gaps and where programs can be expanded.</p>	<p>Visitor facility enhancements and kiosk standards are not funded and implemented.</p>	<p>Environmental education programs not developed with schools. Programs not evaluated.</p> <p>Interpretive programs do not contain or deliver core messages or focus on key resource issues.</p>

Appendix VI

General Information on U.S. Demographic and Outdoor Recreation Trends

From *Outdoor Recreation in American Life: A National Assessment of Demand and Supply Trends*, U.S. Forest Service, 1999:

“The rise in importance of outdoor recreation in Americans’ lives is one of the dramatic changes, as well as challenges, now occurring in the United States.”

“While there is abundant information on what people do to recreate in America, there is usually much less researched-based information describing why Americans do what they do, how satisfied they are with the opportunities available to them, what barriers restrain them from additional recreation participation, and how they learn about recreation choices.”

- Projected U.S. Population by 2050 – 390 million people (2004 population is 293 million)
- Expanding populations will largely be centered in urban and suburban locations. As metropolitan areas expand, they will move closer to or encompass many refuges. The need for managing visitor capacity and communicating with the public will become a critical element of refuge management.
- Walking (hiking) is one of the fastest growing outdoor recreation activities followed closely by family “outings.”
- An aging population may well make walking a primary outdoor activity in the U.S.. Therefore, more people will seek safe and well-maintained trails.
- Increasing reliance on technology and sub-urbanization will lead many more Americans to seek opportunities for “time away from it all.”
- Bird (wildlife) watching is also one of the fastest growing outdoor recreation activities in the U.S.
- A 1998 survey found that 95 percent of Americans over the age of 16 participated in some form of outdoor recreation.
- Increasing visitation will create greater demands on maintaining and improving facilities and trails. Investing in small facilities, which require less maintenance, will be the trend as funding becomes limited.
- Surveys have identified the following benefits of outdoor recreation: a healthy environment, healthy and involved communities, strengthened families, improved personal health and well being, and a perceived improvement in the quality of life.